



THOMAS G. NEWMAN,  
EDITOR.

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**Supply Dealers** who are now preparing to issue their Catalogues, should be careful to get the prices of Books and Periodicals correctly stated. We notice that several which have already appeared, give wrong prices for Books, and also for the AMERICAN BEE JOURNAL. It would be better to omit mention of them entirely than to quote them wrongly. It would save trouble and annoyance.

**J. W. Powell & Son**, says a local paper of Mankato, Minn., report having 195 colonies of bees, which produced 7,000 pounds of honey; of which they shipped 5,000 pounds to Iowa, Dakota, etc. They are among the largest and most successful beekeepers of the State.

**G. B. Lewis & Co.**, of Watertown, Wis., had an exhibit of sections at the Detroit Convention, but by some "oversight," no notice was taken of them by the committee on exhibits. Of course it was unintentional on the part of the committee. We give this item to repair, in some measure, the omission, and we are sorry Messrs. Lewis & Co. did not mention it soon enough to have a note made of it in the body of the pamphlet.

**A Brief History** of the North American Bee-Keepers' Society, with a digest of its 15 Annual Conventions, and a full Report of the Proceedings of the 16th Annual Convention held at Detroit, Mich., on Dec. 8 to 10, 1885. This is the title of a new pamphlet of 64 pages just issued at this office. Price, 25 cents.

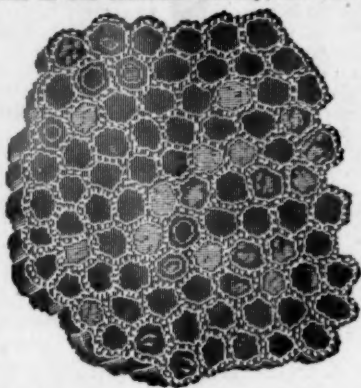
To compile this history and digest of all the past meetings of the Society, has taken much time and labor, and we have no doubt but that it will be duly appreciated by the apiarists of North America.

This pamphlet also contains engravings of the principal honey-plants, and portraits of the Rev. L. L. Langstroth, of Ohio, and Moses Quinby, of New York; two of the pioneers who helped to revolutionize American apiculture, and usher in a new era.

**Petrified Honey-Comb.**—Mr. John G. Ridenour, of Elida, O., on Dec. 21, 1885, sent us a piece of petrified comb, and remarks as follows concerning it:

I send you a piece of petrified honey-comb for the AMERICAN BEE JOURNAL Museum. This petrification of honey-comb was found on the banks of the James river in Montana, by a friend, who said that he knew what it was as soon as he saw it, by its shape and resemblance. He thought he must have a piece for me, as he knew of no one else that had as much curiosity for small things in an apiary as I have. Hold the broken side to the sun and turn it to and from you, and you can see the sparkling diamonds.

It is evidently fossil coral, and not petrified comb. It would be proper to call it honey-comb coral. We have several specimens in our Museum already, and this is



added to the number. Prof. Cook, in his Manual, says:

The animals of which these were once the skeletons, so to speak, are not insects at all, though often called so by men of considerable information.

The species of the genus Favosites first appeared in the Upper Silurian rocks, culminated in the Devonian, and disappeared in the early Carboniferous. No insects appeared till the Devonian age, and no Hymenoptera—bees, wasps, etc.—till after the Carboniferous. So the old-time Favosites reared its limestone columns and helped to build islands and continents untold ages—millions upon millions of years—before any flower bloomed, or any bee sipped the precious nectar. In some specimens of this honey-comb coral, there are to be seen banks of cells, much resembling the paper cells of some of our wasps. This might be called wasp-comb coral, except that both styles were wrought by the self-same animals.

**New Price-Lists** have been received from the following persons:

J. R. Caldwell & Co., Hoopston, Ills.—16 pages—Given Foundation Press.  
Henry Cripe, North Manchester, Ind.—40 pages—Bee-Keepers' Supplies.  
M. H. Hunt, Bell Branch, Mich.—8 pages—Bee-Keepers' Supplies, Bees, Queens, etc.  
Jos. Nysewander, Des Moines, Iowa—48 pages—Bee-Keepers' Supplies, Bees, Queens, etc. It also contains blank pages ruled for memoranda.

Any one desiring a copy of either of them, can do so by sending a postal card to the address as given above.

**When renewing subscriptions** please send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

**The Queen Decides.**—Recently the *Louisville Medical News* appeared with an editorial on the "Cause of Sex," assigning it to the male and female, according to their respective emotions, etc. Dr. G. P. Hachenberg, of Austin, Texas, who has one of the most extensive apiaries of the South, took issue with the views advocated in the editorial, and in a communication to the editor, advanced the following peculiar theory:

It appears to me that we can only pass judgment on such intricate subjects, by reasoning from analogy. To do this, in this case, the male never has anything to do in determining the sex. The male only imparts its own species, and a part of his individuality, and nothing more; and the intricate process of determining sex devolves on the female alone. That either sex may have some of the features of either parent, is no argument against these views. But for proof: The female bee, usually called the queen, has sexual commerce but once in her life, and for years afterwards, in her propagation, she determines the sex through a choice of her own. If the queen-bee is the key to unlock this mystery of animal life, then the physiological evolution that determines the sex, is solely centered in the female. For a wise purpose, the gift of the queen, that is, the potency of her own choice, has been denied to the latter to determine the sex of her gestation, yet still emotional influences on her part are not a foreign necessity. Evidently the local effects of the spermatozoa is an important factor in regulating these emotions; those with local and constitutional conditions, in the aggregate, favor the evolution of sex, either one way or another. I think it well to study the subject from this stand-point.

**Appreciation** of the AMERICAN BEE JOURNAL for 1886 is so often expressed by our correspondents, that we could not find room for one in a hundred, but the following are a fair sample of all of them:

J. E. Pond, Jr., Foxboro, Mass., writes: "I am proud of the JOURNAL as an American production. It, if possible, grows better and better: at any rate I am pleased to find that reduction in price is not followed by reduction in labor or falling off in merit."

Chas. H. Wiele, Stoddard, Wis., writes: "It is but a little money for so many valuable articles. I would not be without it if it had been raised in price, instead of being reduced."

W. J. Cullinan, Mt. Sterling, Ills., writes: "I have received the JOURNAL as an American production. It, if possible, grows better and better: at any rate I am pleased to find that reduction in price is not followed by reduction in labor or falling off in merit."

**W. A. Pryal**, humorist of the Oakland, Calif., *Express*, is authority for this "funny-dote":

"London has a regularly incorporated association, the object of which is the protection of the butterfly. The society should also encourage the baking of the buckwheat cake, which, according to the old joke, makes the butter fly."

Now, by all means, let a society be formed for the propagation and consumption of the flap-jack, for it will be the cause of making the honey fly, too. The bee is not the only insect that apiarists take a great interest in, as will be seen by the above.

**A Correspondent** sends us the following inquiry. As he is a very young man perhaps we may pardon him for this time, if he will promise not to do so any more. It is almost too pun-ny to be funny:

Query—Did not the paper read by Prof. Cook at the Detroit Convention come nearly "putting a head on" (Heddon) the pollen theory?



WITH  
REPLIES by Prominent Apirists.

### Wintering Bees in a Pit.

**Query, No. 186.**—About Dec. 1 I put my bees into a pit 3 feet deep, and put cloth in the bottom. I placed 1-inch blocks under the corners of the hives, packed corn-fodder between the hives and the sides of the pit, then covered all with dry straw, and over that a cover of boards. Over the boards I put another cover of straw. The bees keep up a continual hum. By letting a thermometer down through a box which connects with the bottom of the pit, I find that the temperature varies from 35° to 45°. Will it do to leave them there for the winter?—J. R., Dec. 24, 1885.

Yes, if it keeps dry in the pit. At any rate do not take them out till a warm day.—DADANT & SON.

I have had no experience in putting bees in pits, but I think that I would leave them just where they are.—H. D. CUTTING.

I should rather the temperature would remain evenly at 45°, but 35° to 45° is as well as I could control my house-cellar in which I have wintered bees successfully. A continual hum is always heard in a cellar containing bees, and if of the right kind, it denotes that they are wintering well.—G. M. DOOLITTLE.

Unless they could be placed in a higher temperature, I would not disturb them; and even if they could, I doubt the advisability of disturbing them, especially if the temperature does not fall lower than 35°.—W. Z. HUTCHINSON.

If you had said that the temperature varied from 40° to 45°, I should say all right. I do not like it as low as 35°. In making a pit, why not make it all under ground and cover it so deeply that you can keep the temperature from 45° to 48°? Do not fear a little gentle hum; it is a note of contentment.—A. J. COOK.

I have had no experience in this kind of wintering, but I should think that the temperature might answer. If the "continual hum" be from a large number of colonies, and resembles the sighing of the wind among pines, I should not be afraid of it; but if it be a continual "zip, zipping," I should feel a little uneasy.—C. C. MILLER.

I do not like your repository at all; however, if I was in your place, I should pile on more straw or earth, or something to raise the temperature about 10°, and keep it more uniform. Bees may become noisy and restless in a high temperature, and no diarrhea result; but if from a low temperature, "look out."—JAMES HEDDON.

The experiment of keeping bees in clamps during the winter months has been tried with more or less success. While I do not think that plan the

best, I should advise in this case to leave the bees alone and not disturb them at all, for fear that disturbance would cause great excitement and injure them more than to leave them where they are.—J. E. POND, JR.

"The continual hum" began with the packing, and they keep it up because of the great excitement and disturbance it occasioned. They were aroused from the condition of hibernating sleep which they had entered on Dec. 1, and it will now be doubtful if they will get settled so as to enter it again. I think that they will be as safe where they are as anywhere. Dec. 1 is too late to pack bees in this latitude. They cannot be packed even in October without some disturbance. But the rustling of a lot of corn-stalks in packing would thoroughly arouse them at any time. All operations about the hives in the fall should be conducted as quietly as possible, and all jarring carefully avoided.—G. L. TINKER.

### When to Move Bees.

**Query, No. 187.**—Would it be safe to move my 23 colonies of bees 30 miles in January, on a sled? or would it be better to move them in the spring, on a wagon, after they have had a cleansing flight?—W. G., Wis.

Move them in the spring.—H. D. CUTTING.

The latter way would be my choice.—JAMES HEDDON.

I should prefer the latter method.—C. C. MILLER.

I should prefer to wait until spring. Bees can be moved as safely on a wagon as on a sled.—G. M. DOOLITTLE.

I should wait until spring; still I am not certain that moving them in winter would injure them.—W. Z. HUTCHINSON.

I have known it to be often done with no harm, but theoretically I should prefer to wait till spring.—A. J. COOK.

I cannot speak for your climate, but I used to select a time when snow was on the ground to go into the hills on the Kentucky River to get bees, hauling them on a sled over the roughest road imaginable, without any apparent injury to the bees. They were in boxes and "gums," and were confined by tying a coffee-sack over the open ends of the "gum." This was 25 years ago.—G. W. DEMAREE.

You had better move them in the spring. We tried sleds to our hearts' content. The jarring is not continuous, but very hard when there is any, unless the sleighing is extraordinarily good. Besides, it excites the bees and does them no good.—DADANT & SON.

Wait till spring, by all means. Any disturbance of a nature such as moving them now would create, will inevitably injure them greatly by breaking up their clusters, and caus-

ing them to eat disproportionately, or die out in detail.—J. E. POND, JR.

Bees may be safely moved on a sled in January, if extra precaution is taken not to jar them in handling or moving. If it was more convenient for me to move them now than in the spring, I would do it, although the spring is the best time usually to move bees. The moving of bees in winter should be entrusted to no one but an experienced apiarist, one who can handle hives of bees as no one else can.—G. L. TINKER.

### Cleansing Foul-Broody Hives.

**Query, No. 188.**—My bees have the foul brood, and I expect to use phenol at once to cure them. I cured one of the worst cases I had last summer, by using Mr. Doolittle's plan. I would be satisfied with his plan if there was an easy way of disinfecting or purifying the old hives, which I am not able to throw away; I have no kettle large enough to boil a whole hive, and it is a big job to knock a hive to pieces and boil each piece. Is there any way of washing out the old hives with carbolic-acid water so as to purify them? I suppose I have 25 colonies that are affected, but I wish to feed phenol in honey and water to all, so as to cure it throughout my entire apiary of 120 colonies.—Texas.

When you have them cured by the use of phenol, tell us all about it in the BEE JOURNAL.—G. M. DOOLITTLE.

I should think that the farmers living near you keep something to scald their hogs in. Here I could borrow a "hog-box," i. e., a large box with a sheet-iron bottom, so as to be set over a furnace. In such a boiler you could boil two or three hives at a time. Quick-lime added to the water would make it more effective.—G. W. DEMAREE.

You can use a sponge and apply the solution, but be extra careful to saturate every spot. I would prefer a kettle or tank and give them a good boiling. If you are very careful and will do your work well, you can cure it.—H. D. CUTTING.

I have never seen a case of foul brood, but if phenol is effectual, why not paint the hives with a solution?—C. C. MILLER.

I cannot say, but why not try washing the hives well with either carbolic acid or salicylic acid dissolved in alcohol? I presume this would disinfect the hives.—A. J. COOK.

We are no authority on this, having never seen a case of foul brood. Several French apiarists claim to have cured foul brood by smoking the bees and hives with dried thyme.—DADANT & SON.

It seems to me that it would cost less to procure a kettle or pan that would hold a part of a hive at a time, than to use as much carbolic acid as would be needed. A pan two feet square and 4 inches deep, would scald every part of my hive by turning the parts.—JAMES HEDDON.

The plan detailed by Mr. Frank Cheshire gives a complete history of the phenol cure. Phenol is simply



pure carbolic acid, and if it will cure the disease, it will, I should judge, effectually cleanse an infected hive, if thoroughly applied to every part.—J. E. POND, JR.

I think that it would be useless to wash out the hives with carbolic acid water, at least with a 5 per cent. solution. A good atomizer, like the little "Gem," I should think would be effectual in cleansing hives used with a mixture of equal parts of phenol and alcohol. I have used so strong a mixture in the sick-room, but it is a little too pungent. In my practice I have found one part each of carbolic acid, alcohol and water used with the atomizer to be highly effectual in the sick-room in destroying the contagion of typhoid fever, scarlet fever, and diphtheria. My experience has led me to think that if the mixture were used in school-rooms in localities where epidemics of the two latter diseases prevail, there would be no need of closing schools, and the epidemics would soon abate. Perhaps the same strength of mixture would be strong enough to cleanse hives of the germs of foul brood.—G. L. TINKER.

### OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

Price of both. Club	
The American Bee Journal.....	1 00..
and Gleanings in Bee-Culture.....	2 00.. 1 75
Bee-Keepers' Magazine.....	2 00.. 1 75
Bee-Keepers' Guide.....	1 50.. 1 40
The Apiculturist.....	2 00.. 1 75
Canadian Bee Journal.....	2 00.. 1 75
Texas Bee Journal.....	2 00.. 1 75
The 7 above-named papers.....	6 50.. 5 50
and City and Country.....	2 00.. 1 50
New York Independent.....	4 00.. 3 30
American Agriculturist.....	2 50.. 2 25
American Poultry Journal.....	2 25.. 1 75
Journal of Carp Culture.....	1 50.. 1 40
and Cook's Manual.....	2 25.. 2 00
Bees and Honey (Newman).....	2 00.. 1 75
Binder for Am. Bee Journal.....	1 75.. 1 60
Apiary Register—100 colonies.....	2 25.. 2 00
Dzierzon's Bee-Book (cloth).....	3 00.. 2 00
Dzierzon's Bee-Book (paper).....	2 50.. 2 00
Quinby's New Bee-Keeping.....	2 50.. 2 25
Langstroth's Standard Work.....	3 00.. 2 75
Root's A B C of Bee-Culture.....	2 25.. 2 10
Alley's Queen-Rearing.....	2 50.. 2 25
Farmer's Account Book.....	4 00.. 3 00
Guide and Hand-Book.....	1 50.. 1 30

### System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the **Apiary Register** and commence to use it. The prices are as follows:

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 25
" 200 colonies (420 pages).....	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers and still keep the record all together in one book, and are therefore the most desirable.

Any person not a subscriber, receiving a copy of this paper, will please consider it an invitation to become a subscriber to it.



**Explanatory.**—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ⊙ north of the centre; ⊙ south; ⊙ east; ⊙ west; and this ⊙ northeast; ⊙ northwest; ⊙ southeast; and ⊙ southwest of the centre of the State mentioned.

For the American Bee Journal.

### Comb Honey vs. Extracted Honey.

17—G. M. DOOLITTLE, (40—95).

On page 759 of the **AMERICAN BEE JOURNAL** for 1885, under the above heading, Chas. Dadant & Son, by an overhauling of my report on page 709 of the same volume, endeavor to prove that Doolittle was not correct in his estimate, that with extracted honey at 8 cents per pound, comb honey could be produced at 12 cents per pound, with equal profit to the apiarist. Messrs. Dadant & Son should be credited with great tact and skill, for certainly such is shown in their weaving the many minor points in my report into their fabric in such a way as to point toward their 20 cents per pound for comb honey, instead of 12 cents as I put it.

Well, I am very glad that they gave us that article, for it gives me a chance to explain farther regarding that report, than I otherwise should have done, and in doing so I will leave them as near the 20 cents per pound for their comb honey as I possibly can and keep truth on my side.

In my report found on page 709, which helped them to draw their conclusions, I gave the number of colonies of bees that I had to start with in the spring, as 40. Twenty of these were good to fair, 10 rather weak, and 10 very weak. Of these, 25 were set apart for comb honey, 2 for extracted, and 13 (the very weakest) for queen-rearing; hence I had 20 good to fair colonies and 7 weak ones producing honey, 5 of the weak ones being worked for comb honey, and 2 for extracted. Without farther explanation all would expect that the 20 good colonies gave more of the comb honey in proportion to their number, than did the weak ones, while the facts in the case are that 2 out of the 5 weak colonies worked for comb honey gave more than the average yield, one giving 139 pounds and the other 128 pounds. The reason for this is as follows:

After I had set apart only the 13 weak colonies for queen-rearing, orders began to pour in for queens to such an extent that I saw that I would be "swamped" if I did not make some provision for more nuclei than I

could possibly make from those 13 weak colonies. Accordingly I began to draw bees from all of the strongest colonies, and used them for nuclei upon the plan I gave last June, taking the brood that they were hived upon from these strong colonies also. These nuclei were built up as fast as possible by giving them a frame of brood occasionally from these strong colonies, so that they constituted the larger part of my increase, as will be seen when I say that in no case was there allowed but one swarm from any of the 25 colonies, and two of them did not swarm at all. Thus we have 23 new colonies from the 25 old ones set apart for comb honey, making 48. Then we have the 13 weak colonies built up to good colonies, and the two set apart for extracted honey, making 63, while the next 32, to make the 95 reported, were made of nuclei built up, and others which were doubled up in the fall.

From the above Messrs. Dadant & Son will see wherein their last paragraph on page 760 of the **AMERICAN BEE JOURNAL** for 1885, has no bearing on the subject. One other item I wish to explain right here. In that paragraph they speak as though they thought that the queens that were used to produce the comb honey were crowded for room. This is a mistake, for such queens were not crowded until after the bees were produced which gather the crop. Here is where they touch on one of Doolittle's hobbies. Nearly all of those queens had 15 Gallup frames which they filled with brood and bees, so that when swarms issued they were not the little swarms that Messrs. Dadant & Son speak of as coming from an 8-frame Langstroth hive, but they were rousing large swarms, only they came a little late in the season, owing to the treatment given the strong colonies which I have spoken of above.

Now comes in the crowding part. When these large swarms were hived they were given only 5 and 6 frames in the brood-chamber, while all the rest of the hive was filled with sections. In this I believe we have one of the greatest secrets toward the successful production of comb honey. Get all the bees you can before the honey harvest, by giving abundant room for the laying-capacity of the queen, and after the honey harvest arrives contract the brood-apartment of all hives, so as to throw the larger part of this force of bees into the sections.

Again, they speak of the 2 colonies worked for extracted honey producing 388 pounds, which is correct; but unfortunately for their 20 cent-per-pound theory, I found when preparing the bees for winter, that these 2 colonies had used up nearly all the honey in brood-rearing that I had left in their hives when taking away the 200 pounds from them, so I had to give them 50 pounds of the removed 200 to insure their wintering; thus reducing the 388 pounds to 338 pounds. Then the 188 pounds of this 338, which was taken with the extractor, was taken before it was sealed over, or in an unripe state, as I wished it for a par-

ticular use, and did not care to have it stay in the hive until it was ripened, as I always insist in having it when it is for market. This would make a reduction of the amount, or of the value (one being equivalent to the other), but I will only call this part to offset the one cent per pound that they give as the value of the washing of the cappings for vinegar. As their was no cappings, of course I could not wash them. When I do have them I never wash them, for the low price of cider-vinegar in this locality, together with the cost of the barrel, makes it unprofitable to do so, especially as we can with a solar wax-extractor entirely separate the honey from the wax or cappings.

Another thing: I am not ready to admit that it takes any less labor or capital, all things considered, to run an apiary of a given size for extracted honey, than it does for comb honey; and I have been carefully experimenting on this point for the past 12 years, producing some of each kind of honey nearly every year during that time. When Messrs. Dadant & Son produce comb honey in sufficient quantities, and become expert so that they can remove all the surplus honey from 90 colonies in 3 hours, as does Mr. A. E. Manum and others here at the East, they will speak less of the extra work required in producing comb honey. So, then, if we call the labor equal in producing both kinds of honey, and offset the 2 colonies producing the 338 pounds of extracted honey with the 2 weak ones worked for comb honey which gave 270 pounds, we shall have about this result: Each colony worked for extracted honey produced 169 pounds, which, at 8 cents per pound, amounts to \$13.52. This divided by 135 pounds (the amount of comb honey given by each of the two weak colonies), gives about 10 cents as the comparative cost of comb honey, which is the estimate given by Mr. Pond in answer to Query, No. 153. If we divide the \$13.52 by the 119 pounds of comb honey given on an average throughout the apiary, we shall have about 11½ cents as the comparative cost of comb honey, which is about what I gave in my answer to Query, No. 153. Now, if we count the increase given by the 2 colonies worked for comb honey (which was two fine swarms) against no increase from the other, there will be but little difference in the comparative price per pound between the two.

However, I will not multiply words, but simply say that after 12 years of careful experiment regarding the production of both comb and extracted honey, I find that when thoroughly ripened by the plans given by Messrs. Dadant & Son, I get, on an average, one-half more extracted honey than I do comb honey, with about an equal expenditure of capital and labor on each. For this reason I answered Query, No. 153 as I did, and I am still of the opinion that the answer "8 cents and 12 cents per pound" as the relative cost of producing extracted and comb honey, is nearly, if not quite, correct.

Borodino, © N. Y.

The Century.

## The Night is Still.

EDITH M. THOMAS.

The night is still, the moon looks kind,  
The dew hangs jewels in the heath,  
An ivy climbs across thy blind  
And throws a light and misty wreath.

The dew hangs jewels in the heath,  
Buds bloom for which the bee has pined;  
I haste along, I quicker breathe,  
The night is still, the moon looks kind.

Buds bloom for which the bee has pined,  
The primrose slips its jealous sheath,  
As up the flower-watched path I wind  
And come thy window ledge beneath.

The primrose slips its jealous sheath—  
Then open wide that churlish blind,  
And kiss me through the ivy wreath!  
The night is still, the moon looks kind.

For the American Bee Journal.

## Infallible Queen-Introduction.

JOHN HEWITT.

So much has been said and written on queen-introduction, "safe," "direct," and otherwise, that the subject would seem to have been thoroughly exhausted; and still successful introduction of queens is only looked upon as "luck" work, if I may judge by the remarks of Mr. James Heddon on page 732 of the AMERICAN BEE JOURNAL for 1885, and others.

The greatest amount of harm has been done by bee-keepers making hasty assertions formed on some observation which they did not comprehend, and these statements repeated time after time until they are accepted as truth. For instance, how many times are we told that old, queenless bees will not accept a step-mother? and yet to such, no matter how old or how long they may have been queenless, I can introduce fertile queens as quickly as I can drop them at the entrances of the hives containing such bees. Could anything be more simple or easy?

It is well known amongst bee-keepers, that bees will not accept another queen while their own is in the hive, nor as laid down by Huber, for 24 hours after her removal; I have observed, which I believe has never been noticed by any one else, that when bees have started queen-cells, they look upon them as their own queen, and will not accept an alien, particularly while they are *unsealed*, and this is the "rock" where so many are lost.

Huber says that bees will accept a strange queen and treat her as their own if she is presented to them at the end of 24 hours; this system is practically like the one of Mr. J. E. Pond, Jr., and if the new queen is caged at the time of removal of the old one and not kept caged longer than 30 or less than 24 hours, no failure will ever occur. I make this as a positive assertion, providing the releasing is done between 24 and 30 hours after removal of the old queens; after 30 hours

queen-cells will be started, then all the "difficulties" begin. If every queen-cell is cut out, when the bees miss them, and before they start fresh ones, they will at this point accept the queen; but not when cells are started again. The older the bees are, the more eager are they to begin fresh cells, hence the saying, "Old bees will not accept an alien queen." So anxious are old bees to rear another queen, that if one is caged in a queenless, unsealed and broodless hive, they will carry eggs dropped by the caged queen and rear queens from them. Those scientists who doubt that bees can steal or carry eggs to rear queens from, had better try this experiment, when I venture to think their stock of knowledge will be increased. But with bees in this state it is almost impossible to get the strange queen accepted; I have tried on one case for 16 days.

Some years ago, when thinking over the question of queen-introduction, I reasoned thus: "When bees are queenless and have no means of rearing another queen (say their own was a virgin and lost on her wedding-trip), has Nature, in her great economical laws, ordained that their generation shall die off and not save themselves by accepting a strange queen which might come to them, say one lost in taking her bridal trip?" The more I thought of this, the more unnatural and repugnant to all her other laws, it seemed to me; so, as I had a stock at the time, which had been queenless two months, I decided to try the experiment. Robbing was rife at the time in the neighborhood, and when I dropped a fertile queen amongst them, the "guards" pounced on her as a robber; but oh, my, their astonishment! they immediately set up a peculiar hum and formed a half-circle round her, and conducted her into the hive, when she commenced laying. I have repeated the experiment so often with all kinds of queens, using imported ones of priceless value, without a single failure, that I may be pardoned for saying that this system of mine is "infallible." The "Law" to bear in mind is this: "The bees must have been queenless at least 30 hours, and have no means to rear another." This law holds good even if laying workers are present, unless they have begun laying, so that the bees of any hive found to be queenless, will accept another without any caging; so also one in which all the queen-cells are cut out on the 9th day, or one where a virgin queen was lost on her bridal trip. The knowledge of this law also enables me to prove in a few seconds whether a hive is queenless or not, without having to hunt up the queen; for, if queenless, they will accept a queen with a joyful hum; if not, they will "ball" her.

I find this system invaluable in the fall, for it very often happens that we want to replace old queens with young ones, or we may have our most valuable queens in colonies that we would rather they did not pass the winter in, and would like to exchange them with others. Now with this system, all we have to do is to take the queen from



the other stock, cage her in a mailing cage, where she will be safe for a week or so; in two days I catch my most valuable queen and drop her at the entrance of the hive from which the other was removed, providing the weather is warm; if it is cold, I drop her in under the quilt, amongst the bees. In two more days I take the one from the mailing-cage and give her in the same way to the other hive. Of course care is required that neither of the hives contain brood or eggs, which can be noted when removing the queens, which is not probable in the fall; but if they do, the combs containing the brood or eggs must be given to other hives in exchange for brood or eggless ones.

My first publication of this system is in the *British Bee Journal* for July 1, 1883, page 83; but bee-keepers do not seem to have "grasped" the value of the idea yet; or perhaps I explained it too briefly for any one to comprehend it. An ex-pupil of Mr. D. A. Jones, of Beeton, Ont., paid me a visit last fall, to see bees migrated to the heather and returned, to whom I showed its practical workings; old queens were removed, and any time when convenient after 2 days, young ones were allowed to run in at the entrance or dropped in under the quilts, and others exchanged. He expressed his astonishment and delight with the process, which he said "licked" all the plans of queen-introduction that he had seen or heard of in the New World. I call it "Hewitt's Direct System" of queen-introduction—direct because the queen alone is given direct and at once, without any caging; and strictly speaking, it is the *only* direct system extant. Reaumur's and Huber's are direct in a degree, while Simmins' is not direct in the least, as a comb of brood and honey covered with bees has to be given as well; while the plan is not even new, having long been used in this country.

The first system of queen-introduction was given by Reaumur 100 years ago, his plan being to confine the bees in a box and then after awhile give them the strange queen; almost exactly as Mr. Doolittle does in making and uniting nuclei. Huber, under date of Aug. 30, 1791, criticises this plan, and while he admits its truths he maintains that the bees are not in a natural condition. Just so! the bees are lost, with no queen or means of rearing one, hence they will *infallibly* accept another after 24 hours; which I am sure Mr. Doolittle will have found to be so. Thus it will be seen that Reaumur's plan is my system in embryo; but by the law I give, it can be varied to suit all conditions and circumstances.

It will be seen that we have *three* infallible ways of safely introducing fertile queens. (I do not in the slightest way allude in this article to introducing virgin queens), and if any failure results it will be on account of not keeping to the rules. For instance: Some direct caging queens 3 days or more; with such advice the wonder is that any are accepted—certainly none will be with old bees; if only

young ones are in the hive, then queen-cells are not usually started for 5 days, when it will act; hence the advice to move the stock to a fresh stand, to draw off the old bees, under the belief that they alone are dangerous; while as a matter of fact the old bees, if caught on broodless comb and kept queenless, will after 30 hours invariably accept any fertile queen at once, if given uncaged, when brood can afterwards be added if wanted.

I am not making this public in haste, as I have for years been testing this great natural law that I have discovered; those who are inclined to doubt its truth, should notice the commotion and noise at the entrance of a stock of bees that are queenless, and having no means to rear another, which noise and commotion I believe is made to attract a strange queen to them. Anyhow, I have had 2 colonies re-queen themselves so, and a friend of mine had one also. Every bee-keeper should note the peculiar hum they make when a fertile queen is given them; it is something like the swarming-hum, so near as I can describe it, but still it is distinct in its peculiarity; however, every bee seems to know that a "mother has come," and begins "clapping" its wings for joy, or it may be to welcome her; whatever it is, in my opinion it is the most poetical phase of the natural history of bees, and I want every bee-keeper to test it for himself.

Now, readers, you all at some time or another want to change your queens; so carefully study this article and you will find it worth all you have ever paid or are likely to pay for the AMERICAN BEE JOURNAL. If anything is not sufficiently clear, I will try and make it so. Tell all, next winter, how you like it.

Sheffield, England.

[By request of Mr. Hewitt, we have printed the word "stock" for "colony," where he had so written it. We prefer the word colony, but defer to the wishes of our correspondents when they express a *decided* preference, as does Mr. Hewitt; lest we should Newman-ize it, as one correspondent expressed it, when mentioning our changing of his verbiage in this respect. Having adopted a nomenclature of terms in bee-keeping, should we not always try to be consistent therewith? When a departure is made from that, we make a note of it.—ED.]

The Wisconsin State Bee-Keepers' Association will meet in the State Capitol at Madison, Wis., on Feb. 4, 1886, at 9 a.m. All who are interested in bee-keeping are invited to attend. The meeting will be held during the sessions of the State Agricultural Society, and bee-keepers who are also interested in topics relating to farming will have an opportunity to hear them discussed. Any bee-keeper having anything new in the management of bees are requested to bring it along for exhibition. Persons paying full fare coming, may obtain a return ticket at one-fifth of the regular rate.

J. W. VANCE, Sec.

For the American Bee Journal.

## The Hibernation of Bees.

WM. F. CLARKE.

Editor American Bee Journal:

The accompanying article will appear in the February number of the *Rural Canadian*. Will you kindly make room for it in an early number of the AMERICAN BEE JOURNAL, and permit me to say that a multitude of claims and calls forbids my noticing the matter just now in a shape more suitable for your columns? By so doing, you will greatly oblige.

WM. F. CLARKE.

Guelph, Ont., Jan. 19, 1886.

The able and unanswerable article of Dr. Tinker on the hibernation of bees cannot but produce a profound sensation among intelligent bee-keepers. In a private letter, which I take the liberty of quoting, the Doctor says: "You will notice that I do not make use of the word 'quiet,' or 'quietude,' because I think the condition the bees pass into implies something more than is expressed by those terms. I shall be pleased, if, after reading my article, you would put in a disclaimer that you are not satisfied with that word to express the actual condition. In my opinion *only the word hibernation is applicable.*"

Many a time and often since this controversy began (about 18 months ago), I have felt like making a clean sweep of "quiet," "quietude," "quiescence," "torpor," "semi-hibernation," and all other words having any ambiguity about them. From the first I have felt as Galileo did about the true theory of the solar system, but, without access to a scientific library, and with the most meagre opportunities for experimenting, modesty forbade assertiveness. The only man in the bee-keeping fraternity who made any pretensions to scientific acquaintance with entomology, treated the whole affair with contemptuous dogmatism, and would not even investigate the theory. I broached it with the simple and reasonable request that bee-keepers would experiment in regard to it. So far as I know, Dr. Tinker is the first who has done this with any thoroughness, and it has been wholly of his own accord. The result is, complete demonstration of the correctness of my position. *There are more to follow.* "They are coming, Father Abraham, 300,000 strong!"

I have no hesitation in accepting Dr. Tinker's article in its entirety, with the exception of what he says as to "the weight of the argument being against the chaff hive," and I merely "ask leave" to let that point rest in abeyance until next spring discloses the result of experiments now being made. Meantime, our best thanks are due and are hereby presented to the worthy Doctor, and the disclaimer he suggests is gladly made. Henceforth, "HIBERNATION" is the word, and none other, that we accept, for, in truth, it is the only term known to science, which is applicable to the case.

Pacific Rural Press.

## Skunks in the Apiary.

WM. MUTH-RASMUSSEN.

The skunk is one of the recognized enemies of bees, and, like most of them, is nocturnal in its habits. The first indication that the bee-keeper has of the visits of a skunk is, that the front of the hive and the entrance-board is blackened as if smeared over with mud, which had afterwards been carelessly wiped off. This is done by the skunk's scratching on the hive with its paws to incite the bees to come out. As it is not strong enough to knock the hive over, like a bear, and get at the honey itself, it is content to eat the bees for the sake of the honey they may contain, although I doubt not that it frequently swallows a highly seasoned morsel.

On closer examination, a hole will generally be found scooped out in the ground in front of the hive, and more or less dead and dying bees, sometimes as much as a handful will be found lying in the hole. It has been said that the skunk manages to get the bees entangled in the hairs of its large bushy tail, and slashing it around in the hole kills or cripples the bees before it proceeds to eat them. As it always leaves a number of bees, many of them still kicking, in the hole, it may be surmised that either it does not take much to satisfy the skunk, or else, getting more stings than honey, it leaves in disgust before it has had enough. However, if a skunk is allowed to visit the same hive several times in succession, it is obvious that it will not take it long to seriously depopulate the colony, more so as its visits are most frequent during the winter, when the bees are not breeding.

A large dog will easily kill a skunk, and some dogs take naturally to that kind of game, while others are loth to tackle a skunk after they once have gotten a dose of its perfume. Skunks may be shot on moonlight nights if the bee-keeper watches for them, but in either case they are apt to leave their scent, which will adhere to the locality for a number of days. The better way is to trap them in a common box-trap with a sliding-door.

The trap may be baited with a piece of old, tough comb or a rag smeared over with thick honey, or with a piece of fresh meat tied securely to the trigger. It should also have a small opening in the top, closed with a shutter, through which it may be seen if it is a skunk, or a cat, or other animal, which is in the trap. If a skunk is caught, carry the trap to a pond or a large, water-tight box; immerse the trap and weight it down with a heavy stone, so that it will be filled and thoroughly covered by the water. If the trap is handled carefully, without shaking or frightening the skunk, it will, as a general thing, not smell. In 10 or 15 minutes the trap may be taken out of the water and the skunk buried deep enough to prevent dogs or coyotes from unearthing it again.

As soon as the trap has been dried out, so that the door works easily, it should be set again, and works apparently better the oftener a skunk is caught in it, as the scent seems to be rather an attraction to others of the same tribe. To prevent the skunk from lifting the door and escaping, a cleat should be nailed across the bottom of the trap, just inside the lower edge of the door. If this cleat is not there, or some other device to hold the door down, the skunk can easily raise it with its long claws.

Independence, Cal.-California.

For the American Bee Journal.

## Small Hives vs. Large Hives.

D. A. FULLER. (80.)

I think that I can best answer Mr. Dayton, page 25, in his reference to my letter on page 762 of the AMERICAN BEE JOURNAL for 1885, by giving a little of my experience in my own apiary. I must acknowledge that as late as the spring of 1883 I was very much in favor of the 8-frame hive. I commenced that spring with part of my bees in 8-frame hives and part of them in the 10-frame ones. That year I commenced using the Heddon super and tiering-up system for comb honey. I found that I was getting but 28 sections on an 8-frame hive, and the 10-frame hives took 32 sections,  $4\frac{1}{4} \times 4\frac{1}{4} \times 13$ -16 inches. This made 4 lbs. more for the 10-frame hive, and I tiered them up 4 high; none of the 8-frame hives were tiered up any higher, and a few of the 10-frame hives were 5 tiers high. But allowing them to have been tiered up the same, I had 4 more sections on the tier on the 10-frame hives than on the 8-frame ones, which made 16 lbs. more honey in favor of the 10-frame hives.

The foregoing was my experience for 1883; in the season I used but 3 8-frame hives, still determined to give them a fair trial; but the result was the same, and those other 3 8-frame hives were condemned to the woodpile. It has often been said that the strongest argument a man can use is one that reaches his pocket, and this did reach mine, to the amount of \$2 per hive, if I compute the 16 lbs. of honey at  $12\frac{1}{2}$  cts. per pound, which is a low estimate. Location certainly made no difference with my experiments as the hives stood side by side.

While tiering-up is not an entire preventive of swarming, if it is closely and carefully attended to the apiarist will not be troubled with many swarms; and if Mr. Dayton could see the swarms that do issue when a colony in a tiered-up hive does swarm, he would conclude that I did not need to compare a third or fourth swarm with an average one. In my plan of working by tiering-up, third and fourth swarms are a rarity.

Some springs I do find it necessary to feed some colonies in wet or cold spells in order to build them up to good, strong colonies by the commencement of the white clover season. My colonies do average more

than 8-frames of brood, and quite often fully 10-frames, at the beginning of white clover bloom; and my experience has taught me that a large (average) hive is better than a small (average) hive.

Cherry Valley, 3 Ill.

For the American Bee Journal.

## Reversing the Frames.

J. E. FOND, JR.

When the matter of reversing frames was first presented, I looked the idea over and experimented somewhat in that direction, and as I had previously met with some degree of success in reversing sections to cause the corners to be filled out, I became quite enthusiastic on the subject, and gave the opinion that they would be or should be universally adopted. A single season with them taught me that I was wrong, and that the benefits claimed by their use was not in accordance with natural law, and could be far more easily attained without the trouble and expense of fitting over frames, as would be necessary in order to adopt the plan.

Chief among the benefits caused by the method of reversing, is the getting of brood in the tops of the frames; not that I pass over that of getting frames filled out in the corners, for by use of full sheets of foundation no trouble of that kind need arise. It is, I suppose, as well known to others as to myself, that the queen will not use store-combs in which to lay her eggs, but will use only such cells as are of the regulation depth. Reasoning from this premise, and on the further ground that the attempt is always made to put honey above the brood, I decided that any plan that would keep the upper part of the comb at just the correct width, viz.,  $\frac{1}{8}$  of an inch, would at once cause the cells to be filled with eggs; and as a matter of course, the stores to be deposited in the sections above.

The question then arose, how can this best be done? Shaving off the combs I found to be too much labor, but upon testing the idea of putting the frames nearer together, I found the plan was a success. If the combs are placed just so near together as to leave a bee-space between them, and allow the whole comb to be  $\frac{1}{8}$  of an inch wide, no trouble will be found in keeping the upper rows of cells filled with eggs, if sections are in place; and if the new top-bar of Mr. G. W. Demaree is used, no brace-combs will be needed at all, while the bees will be found to occupy the sections whenever there is any honey to be gathered and stored.

Perhaps my own experience may not be that of others; however, I would advise that a test be made in different localities, in order that the matter may be fully determined; for if it works elsewhere as with myself, time and labor will be saved, and the production of comb honey greatly simplified.

Foxboro, Mass.



For the American Bee Journal.

## Pollen and Bees—Misrepresentation.

W. ADDENBROOKE.

I fully endorse the article by G. M. Doolittle, on page 6, on "Pollen carried from flower to flower." Most of the readers of the AMERICAN BEE JOURNAL are aware that in England, melons, cucumbers, pumpkins and squashes cannot be raised in the open air; they are all raised in green-houses and hot-bed frames, and many hours have I worked in the garden at home in England, with a fine, long camel's-hair brush, conveying the pollen from blossom to blossom where the bees could not get to do the work; and even now in this climate, if we do not have good weather for the bees to work on the fruit bloom, and especially on red clover saved for seed, we get but a poor crop. Last year I had a good crop of mammoth clover (pea-vine) seed, while a few miles from here there was none, and I think that I owe it to my colonies of Italian bees, for they worked on it first-rate.

I think that if people would only open their eyes, and study "Nature's laws," there would be no need to fight lawsuits caused by spite or ignorance.

I was pleased to see the stand that you have taken in the BEE JOURNAL, on page 19, concerning "more misrepresentations about comb honey." I think that the bee-keepers of the country are greatly interested in causing a stop to be put to all such misrepresentations, and should spare no expense to put to shame such false articles as are now published.

North Prairie, O. Wis.

For the American Bee Journal.

## Upward Ventilation in Wintering.

5—J. M. GOODRICH, (62—120).

Having read Dr. G. L. Tinker's able article on the hibernation of bees, page 5, and having found much in it that is instructive, and which I can endorse, especially the temperature of bee-cellars, yet I must take exception to the remark that, "Somehow I am becoming impressed with the idea that a great part of our wintering troubles comes from upward ventilation in hives." My experience in this climate where bees must stay in the cellar about four months of the year, has led me to just the opposite conclusion after an experience of five years in cellar-wintering.

I cannot keep bees in a cellar here for any length of time without upward ventilation, as they will become so damp that the water will run out of the hive-entrances, and the combs will become so wet that the bees will become diseased and die. Almost every year, until this year, I have put into the cellar some colonies, from some cause either small colonies or covered with quilts (I use board-covers), without upward ventilation,

and in every case water was sure to run out of the hive in a short time; while other hives by the side of them, with upward ventilation, were all right.

In the fall of 1884 I had quite a number of very small colonies—so small that they ought to have been doubled up, but I was very busy and was not aware of their condition until it was too late to unite them; thinking that they were so small that they would not need upward ventilation, I put them (16 in number) into the cellar without moving the covers forward one-quarter of an inch, as in my practice for upward ventilation; the result was that every colony had water running out of its hive in a short time; and when the covers were moved forward, the water stopped coming out of the hive in less than 24 hours, which I find to be the result every time.

My conclusions are that the cellar wants but little ventilation, and outside air let into the cellar when there is much difference in the temperature, is sure to arouse the bees and do harm. But keep the entrances open, with reasonable upward ventilation, so that the moisture will not accumulate in the hive, and the bees will be all right.

Concerning the temperature of cellars: My bees will be quiet at from 40° to 43° above zero, but above that point they are uneasy, and get worse as the temperature is raised.

South Frankfort, O. Mich.

For the American Bee Journal.

## Bees on the Great American Desert.

D. M. IMLAY.

A few years ago people said that "bees won't do any good in this country." Well, I did not dispute it, for I did not know anything about it; but some soon began to try keeping a few bees, and this "Desert" will soon begin to export honey instead of importing it. In 1881 I obtained a colony of bees in a Langstroth hive (luckily), and subscribed for the *Kansas Bee-Keeper*, and afterward for the BEE JOURNAL. Then I went to school two years and did not do much with bees except to get stung and bedaubed with honey; but I will submit my reports, which are as follows:

In 1881 I increased my apiary from 1 to 2 colonies, and got no honey; in 1882 I increased it from 2 to 4 colonies, and secured 100 pounds of honey. I lost one colony in the spring; I think that it was queenless, but I did not know it then. In 1883 I increased my apiary from 3 to 11 colonies, and I lost 4 colonies and bought 8. In 1884 I began with 15 colonies, increased them to 39, and secured 800 pounds of honey. I lost 8 colonies and bought 1, and 2 1-frame nuclei. In 1885 I began with 34 colonies (nominally), increased them to 70, and obtained 1,800 pounds of extracted honey, and 500 pounds of comb honey. With my present experience, and with the bees in about

50 hives, I could have gotten nearly double that amount. The colonies were very weak in the spring to begin with, and they got scarcely any honey until the middle of June, and then only enough to keep up brood-rearing until about the middle of July. After that they got no more until about the middle of August, when they began on buckwheat, and from that to heart's-ease; from these two plants we get our surplus crop. I had only 3 or 4 colonies ready at the right time to take advantage of the flow, but all of these gave over 100 pounds each.

A neighbor had 10 colonies in the spring, increased them to 25, and took 2,500 pounds of honey. He said that he could have taken 1,000 pounds more, had he been at home. It was extracted before being capped, and as I handled some of it, I can say that with the mercury at 50° Fahr., I could take up 2 pounds of it on a large spoon. I would like to ask Mr. Doolittle if such honey should be left on the hive until capped before extracting. The honey was put in screw-top cans as soon as extracted.

I sell all of my honey in the home market, by using pails, and by the means of a sign on my shop. At a very little expense I think I can sell 10,000 pounds next year without leaving our own town, which has about 2,000 inhabitants. This matter of creating a local market cannot be too strongly urged by our lights in apiculture.

My experience in apiculture has been very limited, as I have farmed and worked at other things most of the time, but I may in the near future devote my whole attention to bee-keeping. I rescued 2 colonies from the brimstone-pit, and bought 23, then sold one, and brimstoned one that was queenless. During the fine weather in December the others fell to robbing, so my apiary now consists of 93 colonies.

Last year I had some trouble in feeding bees. Will some reader of the BEE JOURNAL say whether the following would be a good bee-feeder or not? Take a solid bottom-board and run saw cuts one-half way through the board,  $\frac{1}{8}$  of an inch wide and almost across the bottom; then if the hive tips a little forward and the feed is poured in through a slanting hole in the rear of the hive by means of a funnel, the syrup will run toward the front of the hive, filling the saw cuts. In this way a bottom-board could be made to hold a pound of syrup. Is it good, or not?

Last March I moved my bees about 75 yards without loss. They had a good flight the day before, and were moved in the morning and had a flight soon after; the only precaution taken being to disfigure the old place and lean something up in front of each hive.

In looking over the apian catalogues that I have, I noticed that whenever anything is said on labels for honey about candying, it reads like this: "All pure honey will candy," or "It will candy on the approach of cool weather." Well, I wanted some labels, but my honey

would not candy, and I could not tell my customers that my honey would not candy; so I had some labels printed with a note commencing, "If this honey candies," etc., leaving a doubt in the matter. Now I know that all pure honey will not candy on the approach of cold weather, for the greater part of mine on hand is clear yet, although some has candied; and last year it candied more slowly still. I have known some honey to go over until June and still be clear, and that the best grades of heart's-ease honey. The neighbor mentioned above expressed his surprise at its not being solid by Dec. 1, but this was his first year in Nebraska, and will be his last, as he possessed the true Heddonian spirit and wanted to leave me the field; (but rather, he wanted to go to Kansas).

Now I have told some good things about bee-keeping in Nebraska, and I ought to tell the other side. There is nothing for bees in June, and a great many have died of starvation just as our Eastern bee-keepers were being almost flooded with white clover and basswood honey; but clover is making rapid strides for the West.

Seward, O. Nebr.

For the American Bee Journal.

### Strong Colonies for the Honey-Harvest.

C. THIELMANN.

There is much said by some of our most able apicultural writers, about having the colonies the strongest or most populous "at the right time," or for the main honey-flow, thereby securing the most available honey harvest. This would be no secret to the majority of bee-keepers, if they could only know the time when that large honey-flow would come, or if some of the writers could tell them of its coming every year, so that they could prepare for it and have their bees strong for the harvest.

There may be some localities where the main honey-flows come regularly at the same time or about the same time of the season; but from nearly all the reports and accounts that we read, and also from my own experience during the past 17 years, this rule, on the whole, has not proved to be true. The main harvest here has come only 3 or 4 times at about the same time of the year, all the others having come either before or after the above-mentioned time, though all of them began from the middle of June to the middle of August, excepting one, which began on Aug. 22 and continued till Sept. 23, and gave me a surplus of about 3,500 pounds of honey. In a number of years there was a honey-dearth, when at about the same time of other years we had the best honey-flows. One year I had to feed about 20 colonies of the less stronger ones, to keep them from starvation, with abundant white clover in bloom, too.

I am sorry to say that I have not as yet reached that excellency of apiculture to know just exactly, every

year, when the largest honey-flow is coming. I have learned how to winter my bees best, but as yet I have failed to learn when the best honey-flow will be here. I would be very grateful to any of our fellow-bee-keepers if they would tell me every year when my honey-flow will be at hand. It seems to me that this is one of the questions that can no more correctly be settled than to foretell what the weather will be in the future; therefore I think that it is best, for the majority of bee-keepers to keep their bees as strong as they can all summer, so as to reap the harvest whenever it does come; and it surely will do no harm if the colonies go into winter quarters strong in bees. I also find that the strong colonies stand a honey-dearth a great deal better than do the weaker ones; therefore I fail to see any advantage in this latitude, with so many different honey-producing flowers at times, to prevent or lessen the increase of our colonies at any time in the summer; and, as a rule, they lessen enough themselves in winter and spring. I can never get my colonies too strong, but sometimes I fail to have them all strong enough.

Here white clover is generally abundant, but in some years it fails to yield much honey, and other years it yields plentifully. Basswood is also abundant, and blooms about the same time as it does in Mr. Doolittle's locality, but we have more failures from it than honey-flows. Corn generally comes immediately after basswood, but on an average it does not yield honey here once in 3 or 4 years. I was much surprised to read that Mr. Doolittle had never seen bees gather honey from corn; if he had been here the past summer, I could have shown him where they gather it. My bees stored about 1,000 pounds of honey from it, with which they finished about 2,500 partly-filled sections of the linden honey. It is the best and finest honey that they stored. If I mistake not, the last was the fourth season that my bees have gathered honey from corn (any amount worth mentioning) in 17 years. It is of a yellow whitish color, and can hardly be distinguished from the color of the red clover honey. All of it was very thick, and had a fine, smooth taste and aroma, being free from any after-taste.

In the season of 1884 my bees gathered considerable honey from birch, and very fine honey it was, too. It was no louse honey, either; nor was it gathered from the blossoms of the trees. When I examined it I was almost convinced that what ancient bee-men have said was true, viz: "When it honeys even the stones will yield honey." The honey from the birch was gathered in June, on the young twigs at the joints or junctions where the leaves connect with the twig. There was a little leaf or cup on each side of the junction, which contained the honey. I had never noticed this before, nor did I see it last year.

Three years ago I obtained the larger part of my surplus honey in

August from horse-mint. I am not able to say whether I ever got any honey from that source before that or not, but I can say that I have not obtained any since that, with large quantities of horse-mint bloom within 80 rods of my apiary the last two seasons.

Under the above circumstances the readers can see that a certain time of the season could not be ascertained in which to have our bees in prime condition; nor would the subtraction-plan be of any advantage, as we do not know when the main harvest is coming.

Thielmanton, O. Minn.

For the American Bee Journal.

### Ventilation and Temperature in Winter.

C. W. DAYTON.

As a specialist in the bee-business, I endorse nearly all of the article on page 5; however, I would differ slightly by giving upward ventilation and maintaining a temperature of 43° or 44°. Some way or another I have failed in wintering bees without upward ventilation, though I have had moderate success by contracting the brood-chambers so that it would be entirely filled with bees. Virtually, this would be upward ventilation, there being a draft passing out at the bottom of the hive.

While hibernation may be (and I believe that it is) a key to the winter problem, the old difficulty remains, viz., failure in making the bees hibernate not only in the forepart of the winter, but in the latter part also. To make bees hibernate for a time is an easier task to perform than it is to follow them up and find out what caused them not to hibernate. Each of these tasks I think that I have to some extent accomplished, and to give an idea to what extent, I might state that in an August number of the BEE JOURNAL for 1885, I related how, in the previous fall, I prepared 60 colonies with upward ventilation and 40 colonies without upward ventilation, to be wintered in the same cellar; how in mid-winter I found moisture on the under side of the covers over the cluster of the un-ventilated colonies; and that on May 1 the 40 colonies were nearly all dead, while the 60 remained healthy. Again, last fall I prepared 111 colonies with ventilation and 1 without ventilation, and placed it in the same cellar with the 111; at this time that solitary colony is afflicted with disease, while all the others are healthy.

Let beginners not be led astray in the belief that upward ventilation or downward ventilation, high temperature or low temperature, natural or artificial stores, comprise all and the only requirements for successful wintering, as it will be found that they are only a few of the many factors to be considered. The soonest way of finding out the necessary factors for their cases, is to get extensively into the business, read, experiment and lose bees with the rest of us, and



then, if they have been persevering and economical enough to have maintained a subsistence in the face of Borean winters, light crops and low prices, they will stand a chance, at least, of being able to truthfully say that they know which are the necessary factors in wintering, and can winter their bees successfully.

At this time it seems as though location may have something to do with the condensation of moisture. I always had supposed that the condensation of moisture was common in all countries where the wind blows and the rain falls. In the fall of 1882 I placed in the cellar 13 colonies that were in large observatory hives. Through the glass I watched daily, from Nov. 9 to April 12, the actions of the bees. There was no upward ventilation given, and they had been in the cellar but a short time before the glasses were dripping with moisture, and water ran from the combs. I saw individual bees leave the cluster and sip moisture a great number of times. On April 12 but one hive contained live bees, while on the bottom-boards of the others there was mold, moisture and dead bees fully two inches deep, and all the characteristics of disease were present. The hive containing live bees differed from the others in having two 1½-inch holes about 4 inches from the top. Were bee-keepers as apt to report failures as successes we would have more abundant evidence that this case is a fair example of the condition of hives where the bees die with disease.

From the writings of certain bee-keepers who winter bees with success without upward ventilation, in temperatures varying from 40° to 70°, it is made to appear as proper to let the bees arrange the ventilation, and store them in any moderately warm repository. In my case, and as also in the case of neighboring bee-keepers, such management has always proved very disastrous. For all of our skill we can figure no difference in effects in warm temperatures, except as bearing relation to moisture. Though we have been moderately successful in wintering bees packed with some porous substance, like the inquisitive Yankee we wish to know why every one cannot winter bees successfully without upward hive-ventilation, as does Dr. G. L. Tinker, H. R. Boardman, or Ira Barber.

Bradford,  $\delta$  Iowa.

For the American Bee Journal.

## Care of Bees in Winter.

J. H. ANDRE.

I have noticed in the AMERICAN BEE JOURNAL and elsewhere that bees, after they had been prepared for winter, should not be disturbed until spring. Perhaps this advice will be followed by some beginners, and when spring comes, and an examination of the bees is made, several colonies may be found to have died from starvation, or from some other

trifling cause which might have been easily remedied if the bees had been examined every two weeks.

My bees are wintered in a fruit-and-vegetable cellar, that is visited with a light from two to four times per day. I also remove the dead bees from the hives every two weeks, and their humming may be heard at all times; towards spring it becomes a continual roaring, and yet my bees always winter well. I have had them breeding six weeks before they were taken from the cellar, and such colonies were the best of all. I put the most of my bees in for the winter as early as Nov. 15, last fall, and the balance I left out until Dec. 11, hoping that they would get a flight. Some that I had fed liberally were put into winter quarters without their young bees having a flight. This will be a test case, and if nothing prevents, I will speak of it again next spring.

Owing to poor health, and an inability to give my bees proper care, I found that one was queenless and had died, the cold weather of November having been too severe for their thin ranks, and the last survivors had the diarrhea. I suppose that some would say that it was pollen that caused it. What a pity it was not one of the late-fed colonies, so as to make it sure.

Lockwood,  $\delta$  N. Y.

## Convention Notices.

The Northeastern Michigan Bee-Keepers' Association will hold its 4th annual meeting on Wednesday, Feb. 3, 1886, in the Common Council Rooms at East Saginaw, Mich. The Sherman House, one block from the place of meeting, will entertain those present, at \$1.00 per day. Saginaw people are working hard to make the meeting a success. Let us all go and show them that we appreciate their efforts.

W. Z. HUTCHINSON, Sec.

The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Tuesday and Wednesday, Oct. 19 and 20, 1886.

J. M. HAMBAUGH, Sec.

The Seventeenth Annual Convention of the New York State Bee-Keepers' Association (formerly the Northeastern) will be held in Rochester, N. Y., on Feb. 16, 17 and 18, 1886. This will be one of the largest meetings ever held in the State. A large number of our most experienced bee-masters will take part in the discussions, and several essays will be read from a number of our most practical apiarists throughout the country. The programme is complete. If you are young in the work you can not afford to stay away—If older, you may give some good hints, if you get none. We want a good display of all kinds of supplies and fixtures. We have a room on purpose for exhibits, and any goods sent to the Secretary in care of the "National Hotel," Rochester, N. Y., will be placed on exhibition, and either sold or returned to the exhibitor, as directed. Reduced rates at the hotels have been secured, also rates on some of the railroads. All will have to pay full fare one way—return ticket at 1-3 fare by presenting certificate from the Secretary, who will furnish them on application. We want an active vice-president in every county in State. Please name one or send the name of some one, for your county.

F. C. BENEDICT, SEC.

## Local Convention Directory.

1886. Time and place of Meeting.

Feb. 4.—Wisconsin State, at Madison, Wis.  
Dr. J. W. Vance, Sec., Madison, Wis.

Feb. 3.—N. E. Michigan, at East Saginaw, Mich.  
W. Z. Hutchinson, Sec., Rogersville, Mich.

Feb. 16-18.—New York State, at Rochester, N. Y.  
F. C. Benedict, Sec., Perry Centre, N. Y.

Apr. 27.—Des Moines County, at Burlington, Iowa.  
Jno. Nau, Sec., Middletown, Iowa.

Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.  
J. M. Hambaugh, Sec., Spring, Ills.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

## SELECTIONS FROM OUR LETTER BOX

**Bees Wintering Grandly.**—J. E. Cady, Medford,  $\delta$  Minn., on Jan. 15, 1886, says:

We are snowed in up here with 2 feet of snow on the level. My bees are wintering grandly in a temperature of 48° above zero.

**Bees did Well.**—J. J. Hopkins, Brookside,  $\delta$  Pa., on Jan. 2, 1886, says:

My bees did very well for this neighborhood, last year. I had 39 colonies last spring, and I extracted 1,160 pounds of honey from 10 of them, and took 1,641 pounds of comb honey from the balance; besides increasing my apiary to 55 colonies.

**Learning by Experience.**—Rev. Weisel Beale, New Madrid,  $\alpha$  Mo., on Jan. 19, 1886, says:

This is my fourth year of bee-keeping. I have learned some things by paying for them! Yet I feel a growing interest in the business. I will start in the season of 1886 with 15 colonies. I had about that number last fall, but I had to part with all but 4, which I transferred to this place when I moved from Shawneetown, Mo. I take great pride in my bees and love them. My hives are all nicely painted and equipped. About next year my experience will have ripened enough for me to presume to render an opinion on some of the important questions of the day in apiculture.

**Extremely Cold Weather.**—G. M. Doolittle, Borodino,  $\odot$  N. Y., on Jan. 14, 1886, says:

We have just passed through the coldest week ever known in this locality by the oldest inhabitant. The mercury scarcely reached as high as zero during the entire week, and was as low as 15° to 30° below zero much of the time. On one day the sun shone brightly all day, but the mercury stood below zero all through the day. Such cold on a clear, still day was never before known in central New York.

**Bees in Good Condition, etc.**—P. B. Thaxton, Blue Springs, Mo., on Jan. 18, 1886, says:

In the fall of 1883 I bought 6 colonies of bees. I have held my own very well, having now 120 colonies in apparently good condition. I have made but little money in the business, still I am not discouraged. I have read Prof. A. J. Cook's and Henry Alley's works on bee-keeping, which I consider very good, but the AMERICAN BEE JOURNAL has been worth more to me than everything else. I could not do without it. The article on page 6, by Mr. G. W. Demaree, is worth money to me. I am through feeding sugar syrup to my bees. All who have not done so, should read that article, and then work in the interest of the honey market, and, as Mr. Demaree says, "Let the sugar market take care of itself."

**Bee-Keeping in W. Virginia.**—W. B. Zinn, Holbrook, W. Va., on Jan. 12, 1886, writes:

Last spring we had a fine apple bloom here in W. Virginia, and our bees did finely while it lasted. They gathered some honey and got a good start in brood-rearing. After that was gone they had scarcely anything for a while. We had no white clover bloom. The past summer was too dry for bees to gather very much honey. We had some red clover that the Italians worked on. The black-gum bloom was good and the bees made good use of it. The linden-bloom was pretty fair, so the most of the old colonies gathered enough to winter on and some little to spare. I had 21 colonies last May; during the season I had 9 natural swarms and I made 13 nuclei. I sold 4 colonies and 4 nuclei, which left me 35 colonies. My swarms and nuclei did not gather any honey to winter on. In October I commenced to prepare them for winter. I doubled them back to 25 colonies, and have them all in chaff hives with chaff cushions on them. They were all in nice condition up to the past week. The bee-business has been pretty dull here for the last 2 seasons; some lost their bees last winter, and last summer being so dry, some have become discouraged. I winter my bees on the summer stands.

**Heavy Frosts in Florida.**—Jno. Y. Detwiler, New Smyrna, Fla., on Jan. 11, 1886, says:

The heavy frosts in this vicinity have utterly ruined our prospects for the coming crop of mangrove honey. The mercury is reported by various parties as being as low as 10° to 20° above zero. Fish have been frozen by the thousands, green turtles are floating on the water perfectly benumbed, and oranges are frozen as hard as chunks of ice. There has been nothing like it since 1835, when the mangrove was entirely annihilated. On the Peninsula the mercury was 20° above zero. I will report later, as to the extent of damage, when this "cold snap" moderates.

**Amiability of Italian Bees.**—Peter Billing, Pawnee City, Neb., on Jan. 15, 1886, says:

I am somewhat in darkness concerning the amiability of Italian bees. I have often heard and read that Italians were more gentle than the common bee, but with me this has so far proven the reverse. About 7 years ago I began with the common bee, and soon I could hive and handle them without much smoke or protection; but after a few years they became hybridized, and were ugly things to handle. So I concluded to Italianize them; but the bad temper has by no means subsided. They have their 3 distinct yellow bands, are good honey-gatherers, fast to increase, and I might say moth-proof; but woe unto the man that jars the hive or comb when manipulating, or crushes a bee, or blows his breath among them! for sometimes, seemingly without any cause, they will dash forth and attack one furiously. I would like to have some light thrown upon this subject through the JOURNAL.

[The bees are evidently cross hybrids; not Italians.—Ed.]

**Decreasing Breeding, etc.**—C. P. Dadant, Hamilton, Ill., writes:

On page 25, Mr. C. W. Dayton seems to be of opinion that the breeding should be decreased 37 days before the end of the honey harvest. I wish to warn the reader against too early a decrease of breeding. First, young bees are needed in the hive for nurses, comb-builders, etc., till the end of the harvest, or else older bees will have to remain at home in their place. Again, apiarists never know the exact date of the beginning, much less of the ending, of the honey crop, until it has taken place. It is safe to say that the apiarist who will try to force the date of the closing of the crop 37 days ahead, and decreases the breeding in anticipation, will, as a rule, be unsuccessful. Again, in Illinois and many other States there are two crops—the clover crop and the summer or fall crop. Mr. O. N. Baldwin mentions them on page 24, but he thinks that they are shorter than the real average of the past 20 years. The date of these crops is not fixed, and it is very difficult to be always prepared just in time, unless the beekeeper remains fully prepared through the season. To sum up my views: Keep the colonies strong at all times, but have them the strongest during the flow of honey.

**Red Clover Italians, etc.**—Isaac M. Myers, Millersburg, Ind., on Jan. 12, 1886, writes:

I purchased a colony of red clover Italian bees last spring, and I find that they are very quiet bees, and the honey is nicer than any that I had in 1884. I got 5 colonies from the one weak one. About half of the bees of the colony were dead when I received them, and I am wintering 6 colonies of the red clover Italian bees. I think

that we should work to rear a bee that has a long proboscis, as well as for purity. Their honey is very clear and thick, and tastes nearly the same as bumble-bee honey, which is gathered from red clover and thistles. I find that they work largely on red clover. I will give my cure for bee-stings. I have been stung a great many times, and it swells on me nearly like a rattle-snake bite. I did use tobacco on it to draw the poison out at first, but one day I had some alum in my pocket and I thought I would try it; I found that it did not swell hardly any after I wet the alum and rubbed the place where it was stung.

### Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,  
Monday, 10 a. m., Jan. 25, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

#### CHICAGO.

**HONEY.**—There is an easier tone to the comb honey market, and prices are fully one cent per pound less than at last quotations, 15c. being the price for white comb honey in 1-lb. sections, and some extra nice brings 16c. This is owing to small lots coming into different commission houses, and all being eager to sell, they underbid regular honey houses in order to do so. Extracted honey brings 6@8c. per lb.

**BEESWAX.**—24@26c.

R. A. BURNETT, 161 South Water St.

#### NEW YORK.

**HONEY.**—The market for honey continues dull, and prices are ruling lower; however, if the cold weather continues, it may improve the trade in a short time. We quote as follows: Fancy white comb in 1-lb. paper cartons, 13@14c.; the same in 1-lb. glassed or unglazed sections, 12@13c.; the same in 2-lb. glassed sections, 9@11c., and in unglazed 2-lbs., 11@12c. Buckwheat honey in 2-lb. sections, glassed, 9c.; in 1-lb. sections, glassed or unglazed, 10@11c. Extracted—white clover 8@9c.; buckwheat, 5@6c.

**BEESWAX.**—Prime yellow, 26@28c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

#### ST. LOUIS.

**HONEY.**—The market is quiet and the demand light just now. We quote prices as follows: Choice comb honey, 10@12c. Extracted, in barrels, 4@5c. Extra fancy of bright color and in No. 1 packages, 1/2 advance on above prices.

**BEESWAX.**—Firm at 22@24c. for prime.

D. G. TUTT & CO., Commercial St.

#### CINCINNATI.

**HONEY.**—There is a very small demand from manufacturers for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4@5c. a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12@15c. per lb.

**BEESWAX.**—Good yellow is in good demand, and arrivals are fair, at 20@22c. per lb.

C. F. MUTH & SON, Freeman & Central Ave.

#### CLEVELAND.

**HONEY.**—The market is not quite as active as it has been, owing, no doubt, to many attractions of the Holiday Season. Best white, 1-lb. sections sell at 15c., and 2-lbs. for 13@14c., but there is not so much sale for the latter. Second grade honey is dull at 12@13c. Old white, 10@12c. Extracted, 7@8c. per lb.

**BEESWAX.**—Very scarce at 22@25c.

A. C. KENDAL, 115 Ontario Street.

#### KANSAS CITY.

**HONEY.**—Sales are extremely light and prices are very low. Choice comb honey in 1-lb. sections brings 14@15c.; 2-lbs., 12@13c. Dark fall honey 1 to 2 cents less. Extracted honey is very dull and of slow sale. We had to unload a lot of very fine extracted honey this week at 5c., and stocks continue to accumulate.

**BEESWAX.**—Scarce and higher—22@25c.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

#### BOSTON.

**HONEY.**—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make sales. We quote comb honey in 1-lb. sections at 14@16c., and 2-lb. sections at 12@14c. Extracted, 8@8c.

**BEESWAX.**—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.





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## Special Notices.

**The NEW Heddon Hive.**—We have made arrangements with the inventor, by which we shall make and sell the Heddon Reversible Hive, both at wholesale and retail; nailed and also in the flat. Further announcement will be made hereafter, giving prices, etc.

**THOS. G. NEWMAN & SON,**  
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Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

**To Correspondents.**—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

**"Don't Stop"**—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; but don't stop sending it. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

**The Time for Reading** has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

**Preserve your papers** for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one **FREE** if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

**When Renewing** your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

**Beeswax Wanted.**—We are now paying 24 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

**Agents** can sell the Guide and Hand-Book like "hot-cakes." Send us an order for five copies (with \$2.50) and we will send you the Weekly BEE JOURNAL free for a year. This is a rare opportunity to get the Weekly BEE JOURNAL without cost!!

**Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interest by sending the names to this office, or we will send them all to the agent.

**The Guide and Hand-Book**, is a book of ready reference and an encyclopedia of everything desirable to know. As a guide to the home-seeker, it is invaluable. Its contents are partially given on page 64, and will convince any one of its value. We do not think any of our readers can afford to do without it. As a book of ready reference we find it of great value in our library. We will send the Weekly BEE JOURNAL for a year and the Guide for \$1.30

The proceedings of the North American Bee-Keepers' Convention at Detroit are published in pamphlet form. A copy will be sent free to each paid-up member. All others who desire can secure a copy on the payment of 25 cts. F. L. DOUGHERTY, Sec. Indianapolis, Ind.

**Knitting and Embroidery.**—We have received from the publishers a handy little book, entitled "Knitting, Crocheting and Embroidery," which gives full instructions to all who desire to become successful workers in the art. It contains 70 illustrations and 84 pages, bound in paper cover. The book will be sent by mail to any address for 15 cents, by J. S. Ogilvie & Co., Publishers, 31 Rose Street, New York.

**Perforated-Zinc.**—We have laid in a stock of perforated zinc, for excluding drones and queens, and can fill orders for any size of pieces or quantity at 15 cents per square foot, or in full sheets 3x8 feet at \$2.75 per sheet. We also have pieces cut to fit the Langstroth hive—19½x14½—Price 25 cents each.

**All the Numbers** from the beginning of the year are sent to new subscribers, unless otherwise ordered.

**The Initial Chapters** of "The Heir of the Ages," a thrilling and mysterious love-story, by James Payn, appears in the *Illustrated Graphic* (Cincinnati), commencing Saturday, Jan. 23. This is said to be one of the most interesting stories ever published.

To show the high appreciation in which the *Graphic* is held, it may interest many of our readers to know that the Nonotuck Silk Company, famous for its Corticelli and Florence Silks; the Emerson & Fisher Company, large carriage manufacturers, and the John Shillito Company, all leading houses of Cincinnati, occupied the choice pages of the grand holiday number of that paper, paying the sum of several hundred dollars per page.

The *Graphic* will issue, on May 1, a grand mid-summer number, which will be far ahead of anything yet published.

To any One sending us one new subscriber with their own renewal (with \$2.00), we will present a copy of the new "Convention History of America."

**Are you Entitled** to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for \$1.30.

The Eastern New York Bee-Keepers' Association will hold its annual convention in Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, January 26—28, 1886. The first session will begin on Tuesday, at 2 p.m. All interested in bee-keeping are requested to attend, and bring apian supplies for exhibition. The programme will consist of essays on important subjects, discussions, etc.

E. W. PHILO, Sec.

## Advertisements.

**WANTED.**—Two young men to work with bees. Three hundred colonies—27 years' experience. Address, **S. I. FREEBORN,** 4Atf ITHACA, WIS.

**BEES**, bee-hives, imported queens—first-class—cheap. O. N. BALDWIN, Clarksville, Mo. 4Atf

**60** New Style, Embossed Hidden Name and Chromo Visiting Cards, no 2 alike, name on 10c. 13 packs \$1; warranted best sold. Sample book, 4c. **L. JONES & CO.,** Nassau, N. Y. 11Atf

Use the boss Zinc and Leather Interfering Boots and Collar Pads. They are the best. 45D6t

### A FASCINATING PURSUIT.

Queen-rearing is a fascinating pursuit. Every bee-keeper should rear a few queens for amusement and experiment. The best method for rearing queens may be found in the third edition of **The Bee-Keepers' Handy-Book**, a work of 300 pages and 100 illustrations. Of this treatise on bee-culture, Mr. Langstroth says: "It certainly is the best authority on this important branch of bee-keeping. You have done more, in my opinion, than any one else to facilitate the breeding of choice queens, and to simplify the process by which those who breed such queens either on a large or small scale, can make the most of all time they devote to this important branch of bee-culture."

The book is handsomely and substantially bound in cloth, and sent by mail for \$1.50 per copy.

Prospectus and price-list of queens and supplies sent free. Address, 4EtH **HENRY ALLEY & CO.,** Wenham, Mass.



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A sixteen-page Monthly devoted exclusively to the Orchard, Vineyard, Nursery and Garden, thoroughly edited by practical fruit growers, well illustrated, spicy, progressive, reliable, strictly first-class in every respect; without a rival in Horticultural journalism. 50 cts a year; Three months trial trip 10 cts; Specimen copy free.

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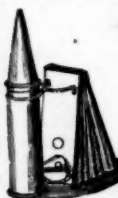
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